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## PRE-APPEAL BRIEF REQUEST FOR REVIEW

Docket Number (Optional)  
Q198-US1

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Typed or printed  
name \_\_\_\_\_Application Number  
10/810,019Filed  
March 25, 2004First Named Inventor  
WEST, Robert C. et al.Art Unit  
1795Examiner  
CREPEAU, Jonathan

Applicant requests review of the final rejection in the above-identified patent application. No amendments are being filed with this request.

This request is being filed with a notice of appeal.

The review is requested for the reason(s) stated on the attached sheet(s).

Note: No more than five (5) pages may be provided.

I am the

applicant/inventor.

Signature

assignee of record of the entire interest.  
See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed.  
(Form PTO/SB/96)

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03/31/2009

Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required.

Submit multiple forms if more than one signature is required, see below\*.

\*Total of \_\_\_\_\_ forms are submitted.

This collection of information is required by 37 U.S.C. 132. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11, 1.14 and 41.6. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.



THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of:  
Robert C. West

Serial No.: 10/810,019

Filed: March 25, 2004

Title: POLYSILOXANE FOR USE IN  
ELECTROCHEMICAL CELLS

MS AF  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Examiner: CREPEAU, Jonathan

Art Unit: 1795

**Pre-Appeal Brief Request for Review**

This communication is in response to the Office Action mailed on February 2, 2009  
(the Office Action).

**REMARKS**

**Rejection of Claims 1 and 55 Under 35 USC §103**

Claims 1 and 55 are the only independent claims that are pending in the application. Claims 1 and 55 each stands rejected as being unpatentable over U.S. Patent number 6,447,952 (Spiegel) in view of U.S. Patent No. 5,606,077 (Lersch).

**Lersch Is Non-Analogous Prior Art**

In order “to rely on a reference under 35 USC §103, it must be analogous prior art.” See header of MPEP §2141.01(a). Applicant submits that Lersch is non-analogous art.

MPEP §2141.01(a) provides a two-part test for determining whether a piece of prior art is analogous prior art. First, “the reference must ... be in the field of the applicant’s endeavor.” MPEP §2141.01(a) also cites *Wang Laboratories, Inc. vs. Toshiba Corporation*, 993 F.2d 858, 26 U.S.P.Q. 2d 1767 (Fed. Cir., 1993). Applicant’s field of endeavor is batteries (see Background) while Lersch’s field of endeavor could be characterized as additives for dispersion paints or lacquers (see Abstract and C5, L51-52); or could be

characterized as coatings for the surfaces of pigments and fillers (see Abstract and C5, L51-52); or as polymer synthesis (see Abstract and Title). In any of these cases, Lersch's field of endeavor could NOT be characterized as batteries. As a result, Lersch fails the first part of the test.

MPEP §2141.01(a) sets forth the second part of the two-part inquiry when it states that if the reference is not in Applicant's field of endeavor, it must "be reasonably pertinent to the particular problem with which the inventor was concerned." Further, a "reference is reasonably pertinent if ... it ... logically would have commended itself to an inventor's attention in considering his problem." See MPEP §2141.01(a) citing to *Wang Laboratories Inc. v. Toshiba Corp.*, 993 F.2d 858, 26 USPQ2d 1767 (Fed. Cir. 1993).

The "particular problem" addressed by the claimed invention is easily identified from the Background of the specification. The last two sentences of the Background state the following:

... polysiloxane based electrolytes typically have a low ionic conductivity that limits their use to applications that do not require high rate performance. As a result, there is a need for polysiloxane-based electrolytes with an increased ionic conductivity.

As a result, the inventors are addressing the problem of low ionic conductivity in polysiloxane-based electrolytes. However, since Lersch does not even teach using the disclosed polysiloxanes in the electrolyte of an electrochemical device, Lersch does not suggest that Lersch's polysiloxanes would increase the ionic conductivity of such an electrolyte. As a result, the inventors would not have consulted Lersch in order to solve their problem.

In response to the above argument, the Office Action points to an article cited on the front page of the Lersch patent rather than to the disclosure of Lersch itself. This article is called the RPI article below. Since the contents of the RPI article **are not incorporated** into Lersch, the only teachings that can be discerned from the RPI article are derived from the citations itself rather than from the teachings in the article. In fact, the most recent Office Action indicates that it is relying on the citation itself rather than the contents of the article.

The important portion of the citation for the RPI article is as follows:

Zhu, Z.; Yang, C.; Einset, A. G.; Chen W. Wnek, G. E., New Polysiloxanes

Bearing Cyclic Carbonate Side Chains: Synthesis and Ionic Conductivity

Studies Department of Chemistry and Center for Polymer Synthesis,

Rensselaer Polytechnic Institute, Troy, NY 12180-3590, 496-497, 1990..

The title from this citation teaches us that Rensselaer Polytechnic Institute (“RPI”) has created some “new polysiloxanes” that have an ionic conductivity. However, there is nothing about this citation that indicates that RPI’s “new polysiloxanes” are the same or even similar to the Lersch polysiloxanes. As a result, this citation does not teach or even imply anything about Lersch’s polysiloxanes. In order to see this, consider an inventor that wanted to see the structure of RPI’s polysiloxanes and/or the ionic conductivity results that were achieved. **That inventor would not be interested in the contents of Lersch but would instead want to see the RPI article.** As a result, this citation actually draws the inventor’s attention away from the teachings in Lersch rather than toward Lersch.

Since an inventor reviewing the RPI citation would have their attention directed away from Lersch rather than toward Lersch, Lersch would not have “commended itself to (the) inventor’s attention in considering (their) problem.” Since Lersch would not have “commended itself to (the) inventor’s attention,” Lersch also fails the second part of the MPEP §2141.01(a) analogous art test.

Because Lersch is both from a different field of endeavor and is not reasonably pertinent to the Applicant’s problem, Lersch fails both parts of the MPEP §2141.01(a) analogous art test. Because Lersch is not analogous prior art, Lersch is not available for use in a rejection of these claims under 35 USC §103 and the rejections should be withdrawn.

**The cited art does not teach or suggest every element of the claims**

Claim 1 is directed to an electrochemical device having an electrolyte with a polysiloxane where “a portion of the silicons (are) linked to a side chain that includes a poly(alkylene oxide).” Claim 55 is also directed to an electrochemical device having an electrolyte that includes a polyisloxane. However, claim 55 recites a particular chemical formula where a portion of the silicons are linked to a side chain that includes a poly(alkylene oxide) moiety (note that n is 2 to 25). As a result, in order to properly support the pending rejection, the cited art must teach or suggest an electrochemical device having an electrolyte with a polysiloxane where “a portion of the silicons (are) linked to a side chain

that includes a poly(alkylene oxide).”

The most recent Office Action states that “Speigel does not expressly teach terminal or middle silicones comprising a poly(alkylene oxide) moiety.” Accordingly, the Office Action relies on Lersch for this teaching. In fact, the Office Action appears to be arguing that an inventor would substitute Lersch’s entire polysiloxane for Speigel’s polysiloxane. Lersch does teach various polysiloxanes. However, Lersch teaches using the polysiloxanes in additives for dispersion paints or lacquers (see Abstract and C5, L51-52); or coatings for the surfaces of pigments and fillers (see Abstract and C5, L51-52). There is nothing in Lersch that teaches or suggests using Lersch’s polysiloxane in the electrolyte of an electrochemical device. Additionally, there is nothing in Speigel that teaches or suggests using Lersch’s polysiloxane in the electrolyte of an electrochemical device. Accordingly, the cited art does not teach or suggest every limitation of claims 1 and 55.

In response to the above arguments, previous Office Actions have noted that Lersch states that the “siloxanes … can also be used as new polymeric materials for optical and electronic applications.” However, teaching that Lersch’s polysiloxane can be used for “electronic applications” does not suggest using them in the electrolyte of an electrochemical device. For instance, even if the Applicant accepted that the claimed electrochemical device was an “electronic application” as cited in Lersch, this phrase still does not suggest that the polysiloxane be used in an electrolyte of the “electronic application.” As a result, it cannot be argued that this phrase suggests including Lersch’s polysiloxane in the electrolyte of an electrochemical device.

Also in response to the above arguments, previous Office Actions appear to be pointing to the RPI citation as suggesting the use of the Lersch polysiloxanes in the electrolyte of an electrochemical device. As noted above, the RPI citation merely teaches that some “new polysiloxanes” have an ionic conductivity. However, the RPI citation does not suggest anything about the value of the ionic conductivity. Further, polysiloxanes are well known to have an ionic conductivity. There is nothing about teaching that a chemical compound has a property that suggests the use of that compound for a particular use. For instance, merely knowing that water has a boiling point does not suggest use of water for drinking, swimming, etc.. Similarly, merely knowing that polysiloxanes have an ionic conductivity does not suggest their use in the electrolyte of an electrochemical device.

Additionally, as noted above, there is nothing about the RPI citation that indicates that the RPI polysiloxanes are the same as the Lersch polysiloxanes. As a result, even if the RPI citation did suggest using the RPI polysiloxanes in the electrolyte of an electrochemical device, it only suggests this about the RPI polysiloxanes but not the Lersch polysiloxanes. As a result, there is nothing about the RPI citation that teaches or suggests using Lersch's polysiloxane in the electrolyte of an electrochemical device.

**Rejection of Claims 1 and 55 Under 35 USC §112**

Independent claim 1 is rejected for being indefinite. The Office Action argues that it is unclear if "the silicons" refers to the terminal silicons and/or non-terminal silicons. Claim 1 introduces "terminal silicons" and "non-terminal silicons" and then refers to "the silicons." Since claim 1 makes no reference to other silicons, it is clear that the phrase "the silicons" refers to terminal silicons and non-terminal silicons.



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